

MOC55315

Introduction to SQL Databases

Durata: 3 gg

Descrizione

Il corso presenta i concetti fondamentali di un database tra cui le tipologie, i linguaggi, il disegno.

Al termine del corso, gli studenti saranno in grado di:

- Descrivere i concetti chiave di un database nel contesto di SQL Server 2016
- Descrivere i linguaggi database utilizzati in SQL Server 2016.
- Descrivere le tecniche di modellazione dei dati
- Descrivere le tecniche di normalizzazione e denormalizzazione
- Descrivere i tipi di relazione e gli effetti in progettazione di database
- Descrivere gli effetti di progettazione di database sulle prestazioni
- Descrivere oggetti di database di uso comune

Il corso MOC55315 sostituisce il MOC10985.

A chi è rivolto?

Il corso si rivolge a chi deve acquisire le competenze necessarie ad assumere un ruolo professionale in ambito database.

Prerequisiti

Buona conoscenza del linguaggio e dei concetti dell'information technology.

Contenuti

Module 1: Introduction to databases

This module introduces key database concepts in the context of SQL Server.

Lessons

Introduction to relational databases

Other types of database

Data analysis

Database languages

Lab : Querying SQL Server

After completing this module, you will be able to:

Describe what a database is

Understand basic relational aspects

Describe database languages used in SQL Server

Describe data analytics

Describe database languages used in SQL Server

Module 2: Data Modelling

This module describes data modelling techniques.

Lessons

Data modelling

ANSI/SPARC database model

Entity relationship modelling

Lab : Entity relationship modelling

After completing this module, you will be able to:

Understand the common data modelling techniques

Describe the ANSI/SPARC database model

Describe entity relationship modelling

Module 3: Normalization

This module describes normalization and denormalization techniques.

Lessons

Why normalize data?

Normalization terms

Levels of normalization

Denormalization

Lab : Normalizing raw data

After completing this module, you will be able to:

Describe normalization benefits and notation

Describe important normalization terms

Describe the normalization levels

Describe the role of denormalization

Module 4: Relationships

This module describes relationship types and effects in database design.

Lessons

Schema mapping

Referential integrity

Lab : Designing relationships

After completing this module, you will be able to:

Describe relationship types

Describe the use, types, and effects of referential integrity

Module 5: Performance

This module introduces the effects of database design on performance.

Lessons

Indexing

Query performance

Concurrency

Lab : Query performance

After completing this module, you will be able to:

Discuss the performance effects of indexing

Describe the performance effects of join and search types

Describe the performance effects of concurrency

Module 6: Database Objects

This module introduces commonly used database objects.

Lessons

Tables

Views

Stored procedures

Other database objects

Lab : Using SQL Server in a hybrid cloud

After completing this module, you will be able to:

Describe the use of tables in SQL Server

Describe the use of views in SQL Server

Describe the use of stored procedures in SQL Server

Describe other database objects commonly used in SQL Server